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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,848

07/12/2006

Osamu Funahashi

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EXAMINER

LE, HUYEN D

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

09/19/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/585,848	<b>Applicant(s)</b> FUNAHASHI, OSAMU	
	<b>Examiner</b> HUYEN D. LE	<b>Art Unit</b> 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 8 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/12/06</u> .                                                 | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nobuo (JP 09-284886).

Regarding claim 1, Nobuo teaches a diaphragm (1) for a loudspeaker comprising a shape overlapping a first circle and a second circle (1, 3, 7 in figures 1 and 3; and 11, 13, 14 in figure 5) in a top view of an outer periphery shape of the diaphragm. As shown in figures 1, 3 and 5, the first circle has a first center point and a first radius, and the second circle has a second center point which is different from the first center point and a second radius which is different from the first radius.

Regarding claim 2, Nobuo shows a through hole for fixing a voice coil (2, 12) formed at a center of the diaphragm (1, 11), and the diaphragm having an edge fixing part for being fixed to a loudspeaker frame (5, 15) via an edge (3, 13) as claimed.

Regarding claims 3-4, Nobuo shows a through hole for fixing a voice coil (2, 12) formed at a center of the diaphragm (1, 11), an edge fixing part (7) at an outer periphery of the diaphragm, and the outer periphery of the diaphragm (1, 11, 3, 13) is substantially circular. As broadly claimed, the outer periphery of the diaphragm (1, 3, 11, 13) has a shape that has a first circle (11) and a second circle (13 or 14) are overlapped each other (see figure 5 and/or the circle

Art Unit: 2615

11 inside circle 13) with the center points displaced in such a manner at least one part of an outer periphery of the first circle (11) and the second circle (13 or 14) forms a part of the substantially circular outer periphery (see figure 5 and/or the annular shape between the first circle 1, 11 and second circle 3, 13 in figures 1 and 5).

Regarding claim 5, Nobuo teaches a loudspeaker comprising a magnetic circuit (4, 14), a cylindrical voice coil (2, 12), a diaphragm (1, 11), a frame (5, 15) and a through hole for fixing the voice coil (2, 12) at a center of the diaphragm as claimed (figures 4, 6).

Nobuo shows the diaphragm (1) having a shape overlapping a first circle and a second circle (1, 3, 7 in figures 1 and 3; and 11, 13, 14 in figure 5) in a top view of an outer periphery shape of the diaphragm, wherein the first circle has a first center point and a first radius, and the second circle has a second center point which is different from the first center point and a second radius which is different from the first radius.

Regarding claims 7-8, as broadly claimed, the outer periphery of the diaphragm (1, 3, 11, 13) has a shape that has the first circle (11) and the second circle (13 or 14) are overlapped each other (see figure 5 and/or the circle 11 inside circle 13) with the center points displaced in such a manner at least one part of an outer periphery of the first circle (11) and the second circle (13 or 14) forms a part of the substantially circular outer periphery (see figure 5 and/or the annular shape between the first circle 1, 11 and second circle 3, 13 in figures 1 and 5).

Art Unit: 2615

*Allowable Subject Matter*

3. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tatsuo Suzuki (U.S. patent 3,180,945) teaches a loudspeaker comprising a basket having an elliptical end portion and a circular end portion.

Isaka (U.S. patent 6,134,337) teaches a diaphragm that is equally divided circumferentially into a plurality of regions.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SUHAN NI can be reached on (571) 272-7505. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUYEN D. LE/  
Primary Examiner, Art Unit 2615

HL  
September 13, 2008